

CLAIMS

1. A method for the coating of a surgical device,  
wherein the coating is carried out by electrostatic powder  
5 deposition.

2. A method as claimed in claim 1, wherein after  
application the powder is heated to form a coherent coating  
layer.

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3. A method for coating a device for implantation in  
the human or animal body or for a medical interventional  
procedure, wherein the coating is carried out by  
electrostatic powder deposition and subsequently the powder  
15 is heated to form a coherent coating layer.

4. A method as claimed in any one of claims 1 to 3,  
wherein the powder material comprises a polylactide,  
polycaprolactone, polyvinylpyrrolidone, poly(acrylic acid),  
20 polyurethane or poly(butyl methacrylate-co-methyl  
methacrylate).

5. A method as claimed in any one of claims 1 to 4,  
wherein the powder material is applied from a source spaced  
25 from the device by a distance in the range of 0.5mm to 5mm.

6. A method as claimed in any one of claims 1 to 5,  
including the steps of

applying a bias voltage to generate an electric field  
30 between a source of the powder material and the device;

applying the electrostatically charged powder material  
to the device, the powder material being driven onto the  
device by the interaction of the electric field with the  
charge powder material and the presence of the charged powder

material on the device serving to build up an electric charge on the device and thereby reduce the electric field generated by the bias voltage between the source of powder material and the device, and

5 continuing the application of the electrostatically charged powder material to the device until the electric field between the source of powder material and the device is so small that the driving of the powder material by the electric field onto the substrate is substantially  
10 terminated.

7. A method as claimed in any one of claims 1 to 6, wherein the device is for delivery of an active material and that active material is contained in the coating.

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8. A method as claimed in any one of claims 1 to 7, wherein the device is for delivery of a diagnostic agent and that diagnostic agent is contained in the coating.

20 9. A method as claimed in any one of claims 1 to 8, wherein the coating includes a source of radioactivity.

10. A method as claimed in any one of claims 1 to 9, wherein the coating includes an agent for the treatment or  
25 prevention of restenosis, or an anticoagulant, an anti-thrombogenic agent, an anti-microbial agent, an anti-neoplastic agent, an antiplatelet agent, an immunosuppressant agent, an antimetabolite, an anti-proliferative agent, or an anti-inflammatory agent.

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11. A method as claimed in any one of claims 1 to 10, wherein the device is a stent.

12. A method as claimed in any one of claims 1 to 10,  
wherein the device is a heart valve.

13. A method as claimed in claims 1 to 10, wherein the  
5 device is a pacemaker, catheter, orthopaedic or dental  
implant, artificial hip or other joint, artificial organ,  
neurostimulator, cardiovert defibrillator, dialysis tubing or  
tubing for heart-lung machine.

10 14. A method as claimed in any one of claims 1 to 13,  
wherein the device is made of metal.

15 15. A device as specified in claim 1 or claim 3, which  
has been coated by a method as claim in any one of claims 1  
to 14.